

A blue-tinted background image showing a robotic arm holding a microchip. The chip is square with a grid of gold pins and a central black square. The robotic arm is made of metal and has several joints and bolts visible. The background is blurred, showing more of the robotic structure.

### Team Phobos

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RENESAS

TC  
CASE  
COMP

# Executive Summary



## Company acquired: Sino Wealth Electronic

- Based in Shanghai, China
- Specializing in manufacturing MCUs for IoT and automotive applications
- Number of employees: 363
- 4 subsidiaries & 3 branches<sup>1</sup>
- Market cap: 20.6B JPY<sup>2</sup>



## Market target

1. Product

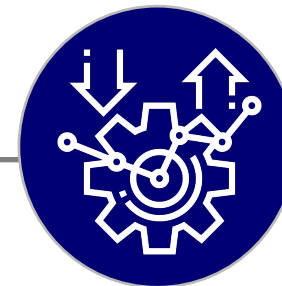
**MCU**

**CHINA**

2. Location

3. Application

**IoT**



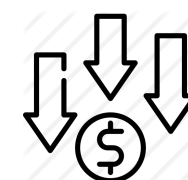
## Impact



Revenue synergy

↑  
**35.70%**

in FY 4\*



Cost synergy

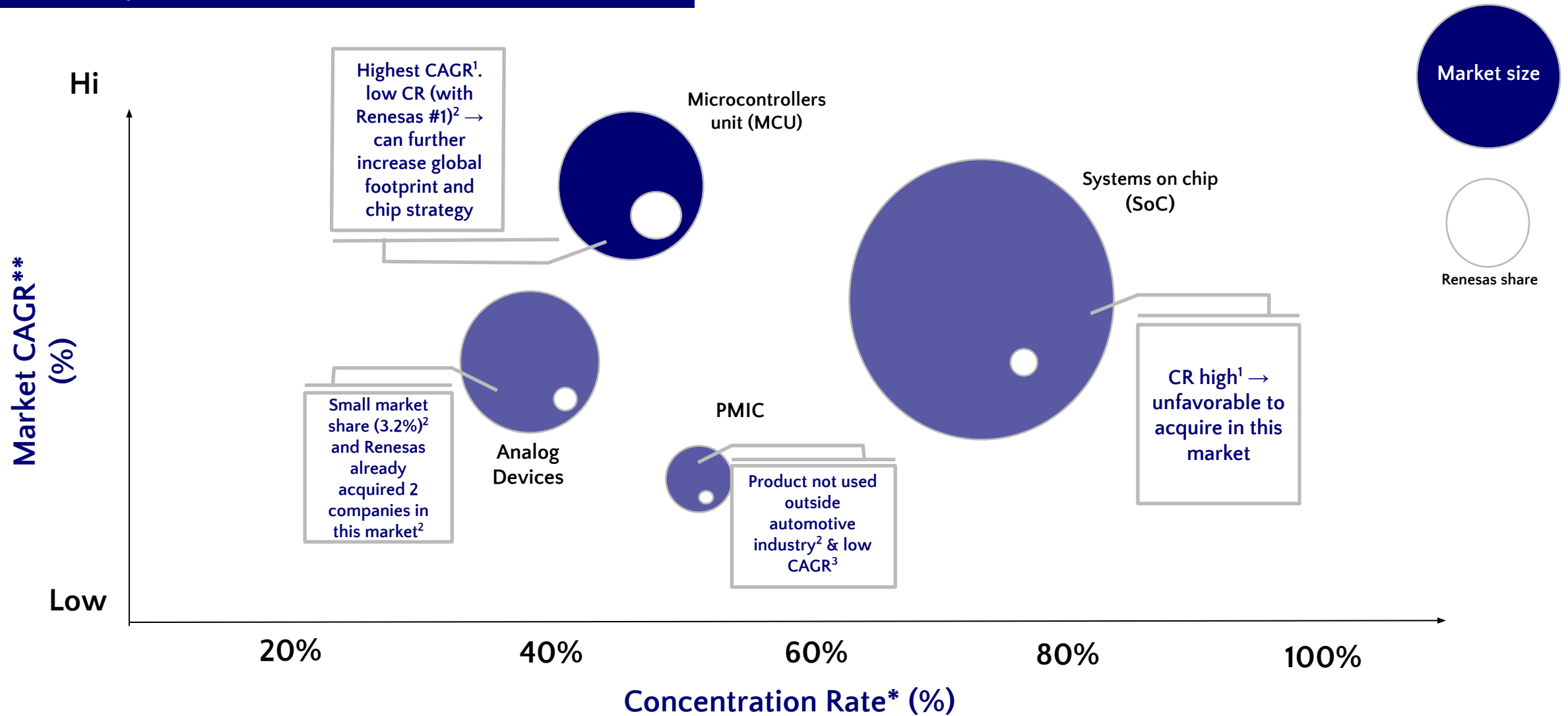
↓  
**13.30%**

across 4 fields\*

<sup>1</sup>DNB <sup>2</sup>Market Watch

\*compared with Renesas & its subsidies standalone

# Industry Attractiveness: Potential & CR

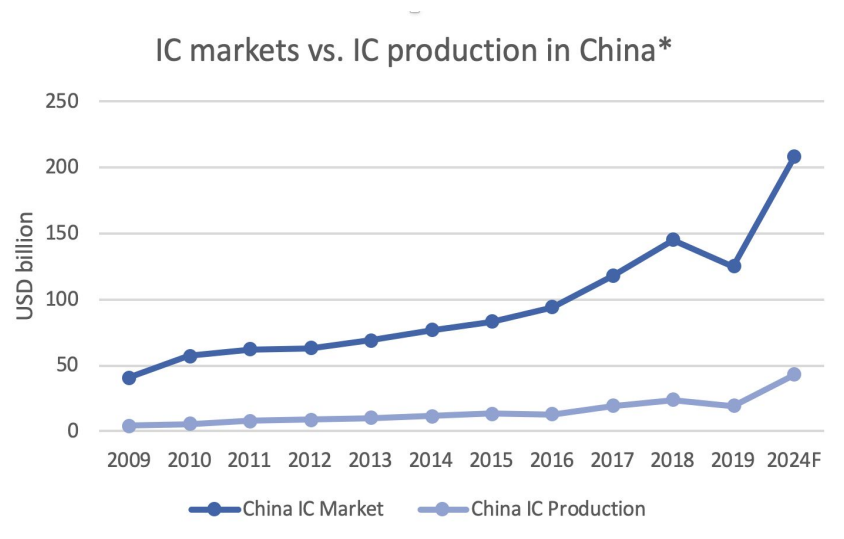


<sup>1</sup>Global Newswire <sup>2</sup>Renesas <sup>3</sup>Marketwatch

\*top 3 companies \*\*from 2020-2024

# Narrowing down the geographical market: China

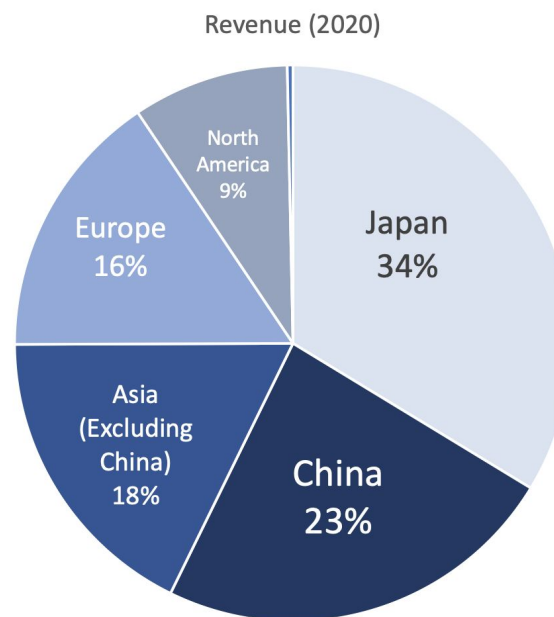
## Low domestic supply



- China has slow growth in production of IC due to talent shortage, low R&D investment and lagged-behind technology.\*
- Affected by restrictions from the US, Taiwan and South Korea → Japanese companies have a chance

\*Deloitte \*\*Renesas

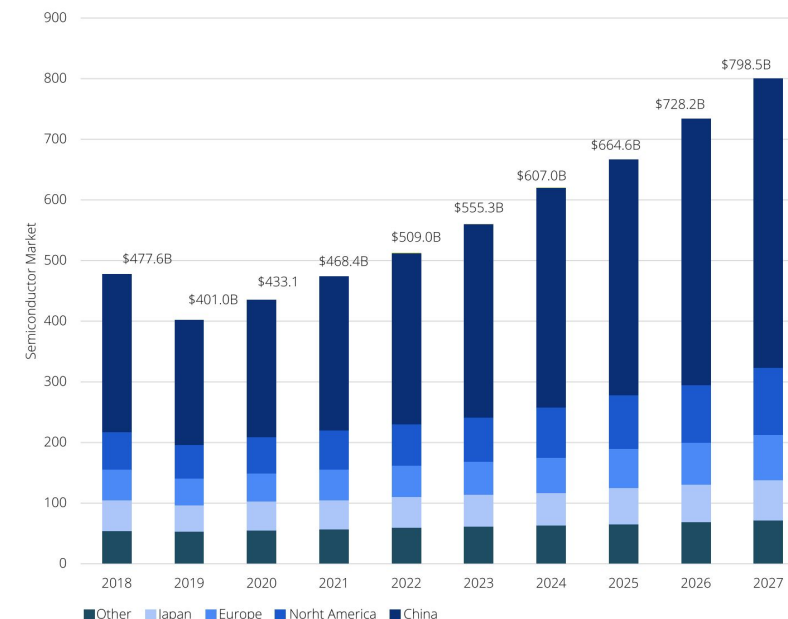
## Established advantage



- China accounted for 23% in total revenue 2020\*\*
- Can utilize SW's factories to ↓ logistics cost

→ Advantageous to acquire

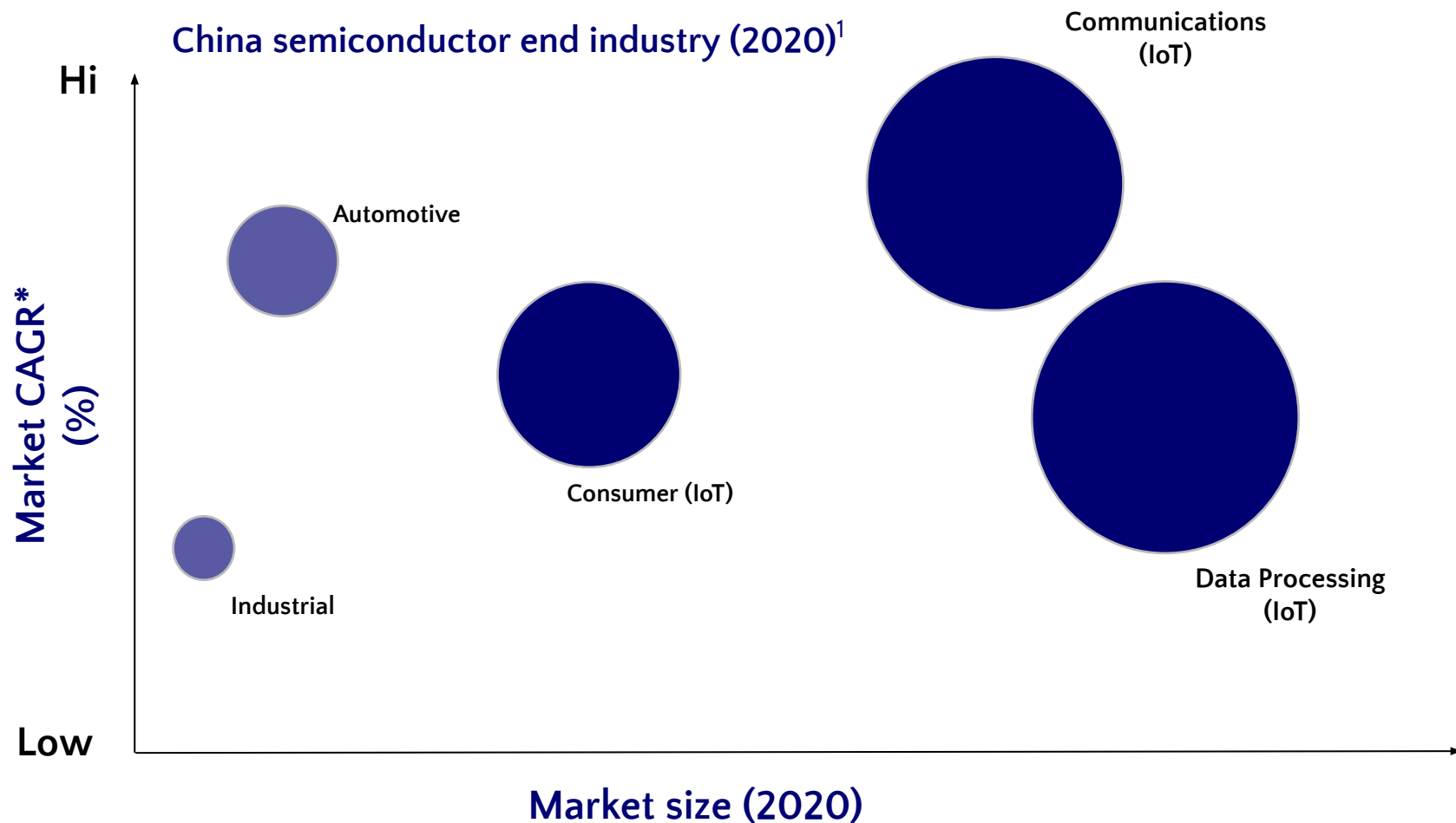
## Highest consumption



- China has the highest consumption of IC in the world.\*

→ Irreplaceable in the market

# Targeting end market in China - IoT



## Trends

- Post COVID-19: IoT applications increase<sup>2</sup>

## Variance

- Further diversify Renesas end market to level with Infrastructure & Automotive<sup>2</sup>

## Usage

- More people switch to hand-held devices for portability

<sup>1</sup>Markets and Markets

<sup>2</sup>Renesas

\*from 2016-2020



# Strategy to target Chinese market

Overall effect on Industry profit: Moderate

## Threats of substituting products: Low

- The industry's technology change continuously
- Firms adapt to change quickly  
→ Constraints for substitutes to enter the market
- There is no close substitute

## Power of customers: Low

- High concentration of buyers
- Buyers purchase a high volume of product
- Demand exceeds supply
- Many industry's competitors
- Buyers are price-sensitive
- High product homogeneity

- Very high concentration of rivals
- Low product differentiation
- Low switching cost
- Low brand loyalty
- Customers are price-sensitive

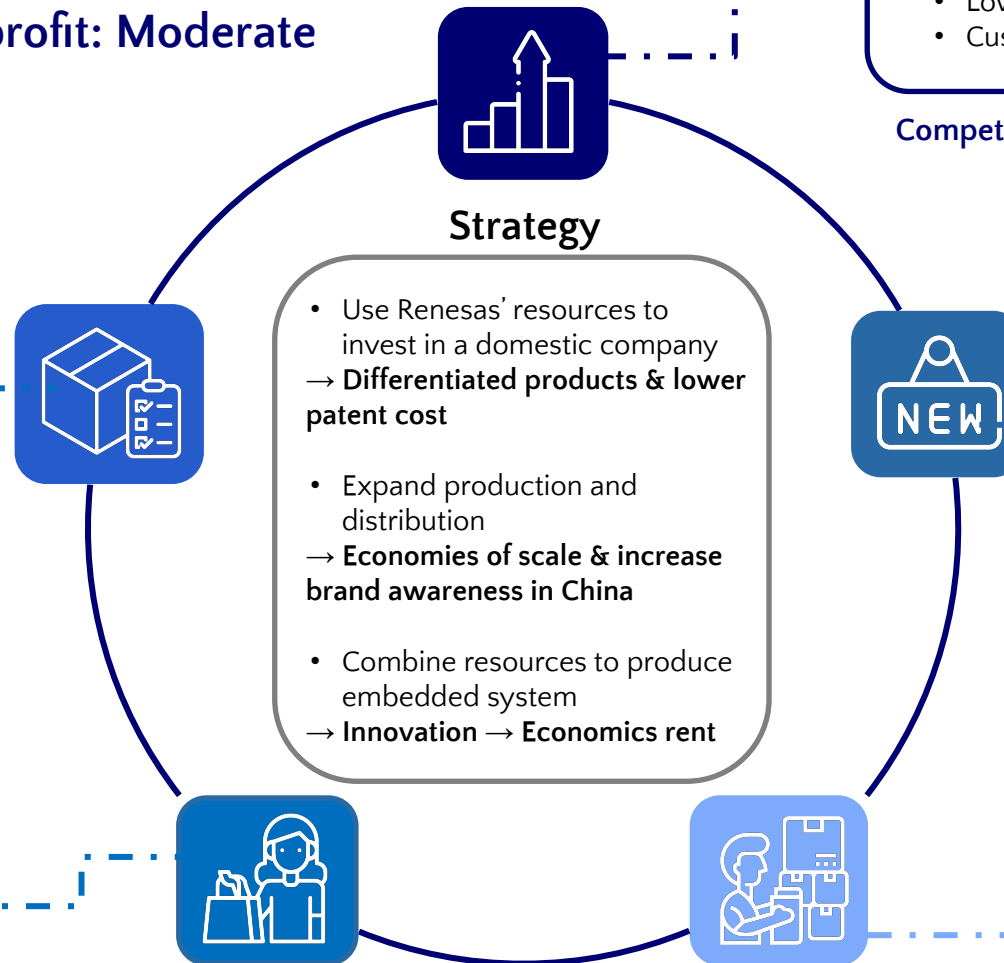
Competition in the industry: Very high

- Barrier to entry: R&D investment
- Economies of scale
- Low investment in specialist equipment (fabless model)
- Low switching cost
- Favorable government policies<sup>1</sup>

Threats of new entrants: Moderate

- High switching cost (for fabless model)
- Suppliers can easily forward integrate
- High concentration of suppliers

Power of suppliers: High



<sup>1</sup>SIA

Summary

Opportunities

Targets

Strategy

Revenue

Cost

Execution

Impact

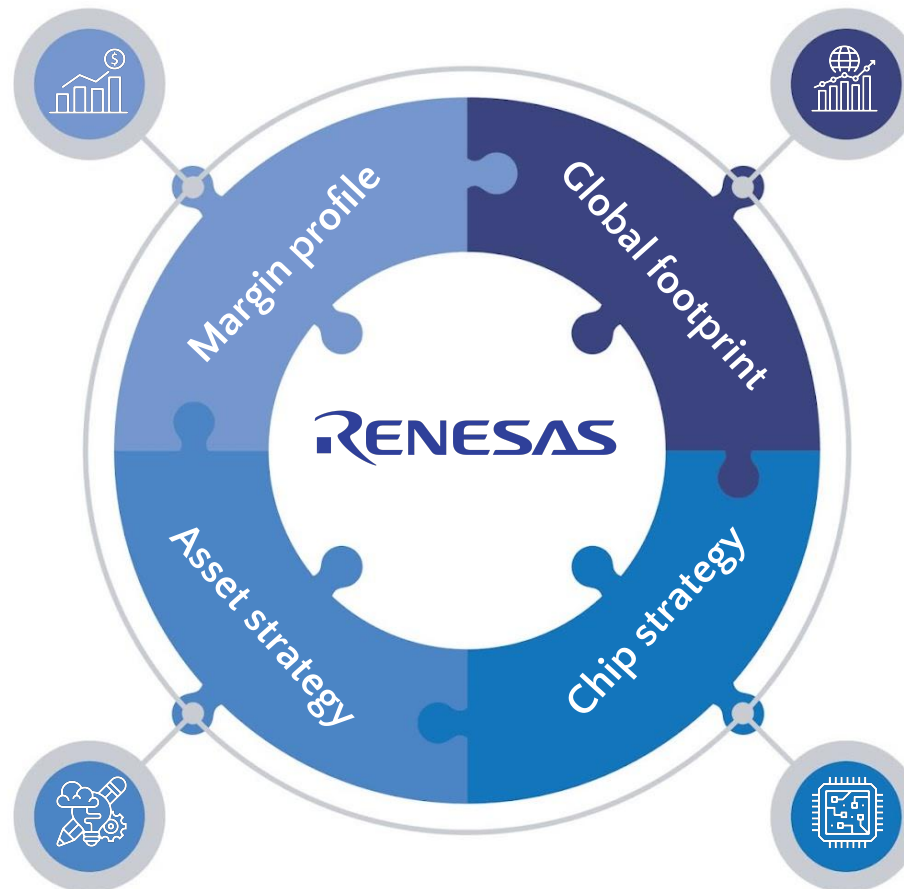
# With every Renesas M&A strategy. Sino Wealth satisfies

## Higher profit margins

- Sino Wealth has a revenue growth rate of 21.34% and a gross profit margin of 38.19%<sup>1</sup>
- Synergizing technology of 2 companies can yield higher prices and lower R&D costs → higher profit

- Sino Wealth is a fabless company
  - Utilizing Sino Wealth's existing subsidiaries and factories to lower logistics and R&D costs

## Fabless



## Further entering China market

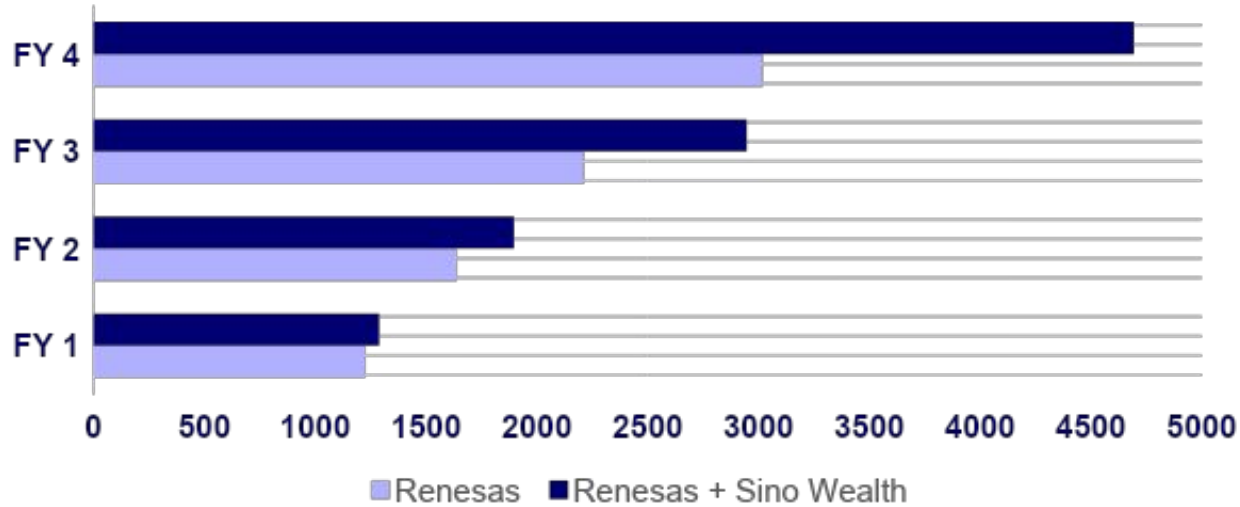
- Utilizing Sino Wealth's brand awareness to further extend Renesas into China market

- Sino Wealth has low-power MCUs that can further integrate into embedded systems & match sustainable development goals
- Sino Wealth MCU for cooling systems that can be integrated into systems for automotive markets & IoT markets

## Extension into embedded solutions

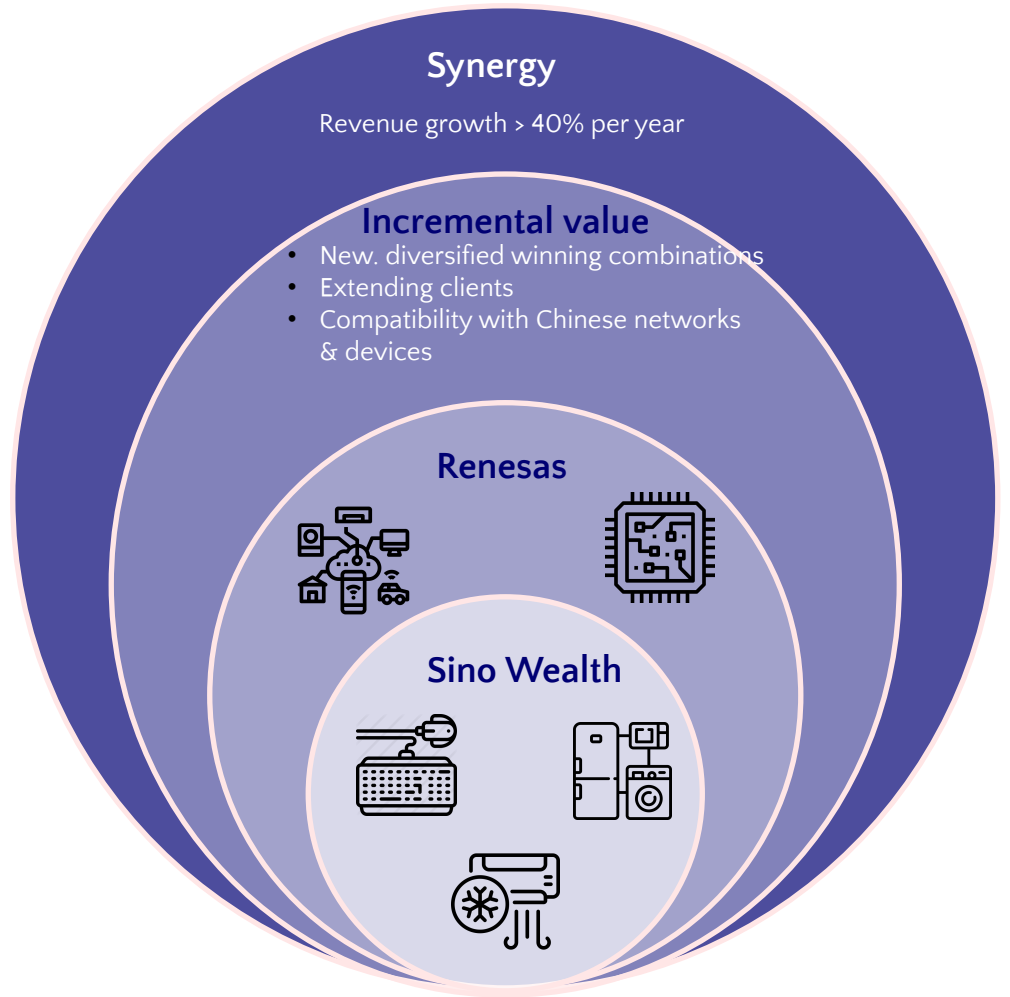
<sup>1</sup>WSJ

# Revenue synergy projection – 4 FY



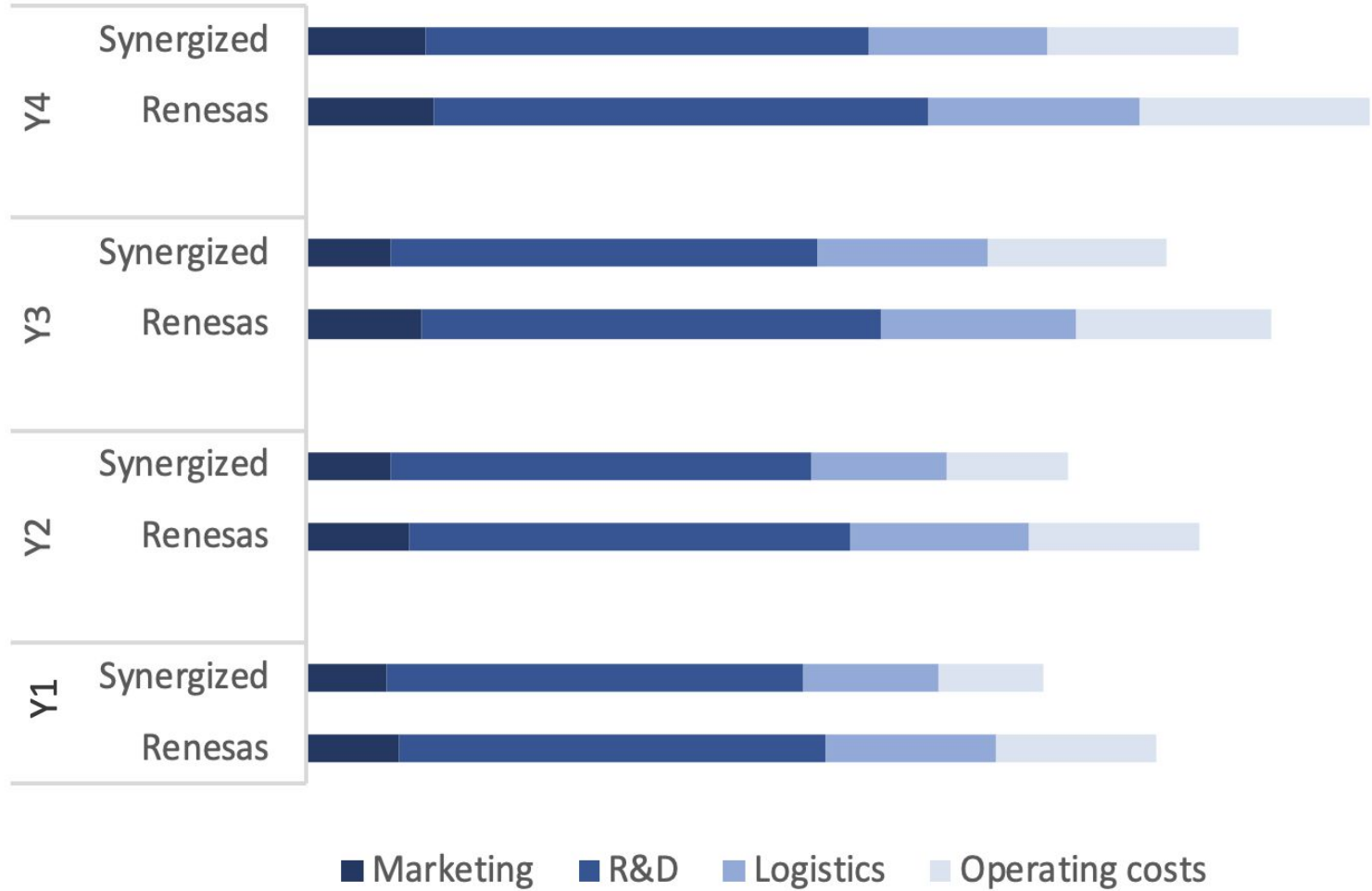
Unit: Billion JPY

|    | Renesas   | Sino Wealth | Incremental value | Consolidated revenue |
|----|-----------|-------------|-------------------|----------------------|
| Y1 | 1226.1564 | 25.50       | 37.5              | 1289.2               |
| Y2 | 1639.3    | 31.3        | 226.5             | 1897.1               |
| Y3 | 2213      | 40.7        | 693.7             | 2947.4               |
| Y4 | 3018.5    | 53.03       | 1622.57           | 4694.1               |





# Cost synergy projection - 4 FY



- Low **marketing** costs to Chinese customers
- Utilizing SW's existing networks



- Lower **R&D increase rate** as technology combines
- Utilizing SW's existing manpower & Chinese products compatibility



- Lower **logistics cost** as ICs can be manufactured at SW's existing factories and partners



- Lower **personnel costs**
- Lower branch set-up costs
- Lower expanding distributor network costs

# Execution plan

| Y0                                     |   | Y1   | Y2  | Long-term                                   |
|--|---|--|---|---|
| Acquisition discussion and transaction | Evaluate and negotiate with Sino Wealth | Regulatory clearance, permanent financing and announce transaction                 |   |   |
| MCU technologies transfer              |   | Transfer technology and operating process  | Expand application in IoT market                            |   |
| MCU production expansion               |   | Combine resources to mass produce MCUs<br>Distribute products through new channels |   | Increase production for consumption and ES  |
| Embedded system (ES) production        | Invest in R&D for embedded system       | Perfecting technology & design   | Use MCUs produced in Renesas & Sino Wealth technology in ES | Mass production of ES & global distribution |

# Marketing strategy

Price

- Products' costs competitive
- Expand cost range

Product

- Diversified MCUs products
- Embedded system technology
- IoT application products

Promotion

- Sustainable development
- Advanced technology

People

- Reduce cost for distributors and manufacturers
- Better product quality for customers

Processes

- Adapt technology from Renesas
- Expand production scale by combining resources from both companies

Physical evidence

- Logo of Renesas on each product

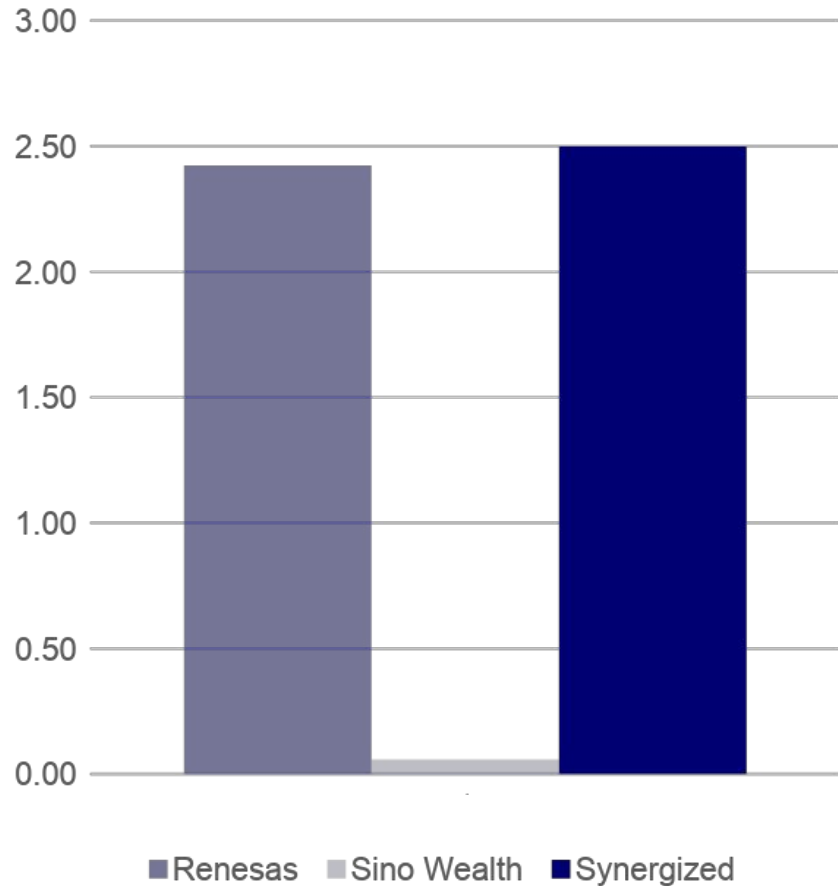
Place

- Expand the footprint in China

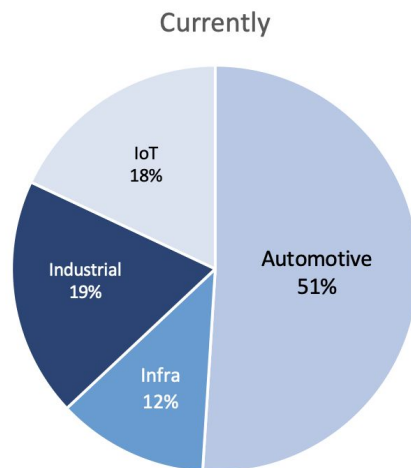
# Impacts: Diversification & NPV

## NPV forecast

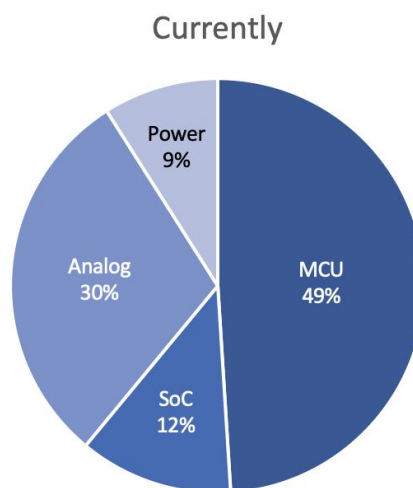
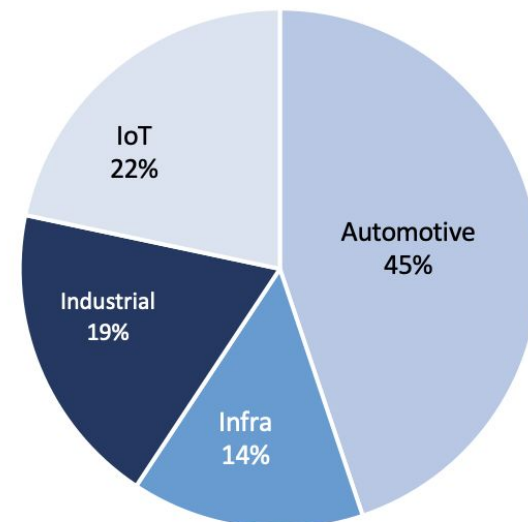
Unit: Billion USD



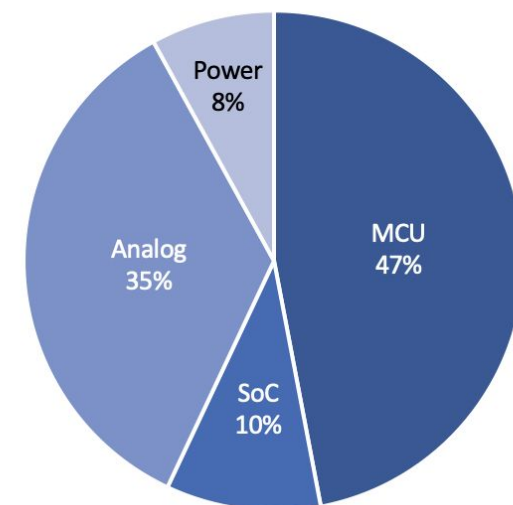
## Diversification



End market



Product



Figures from Case Brief and Renesas

Summary

Opportunities

Targets

Strategy

Revenues

Cost

Execution

Impact





**Thank you**

**RENESAS**

**TC**  
CASE  
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# Appendix 1: Revenue synergy – 4 FY

Current QoQ increase: -10% ( $\pm 1\%$ )  
**(Forecast) Revenue synergy after Renesas acquires SW**

Unit: Billion JPY

|    | Q1                    | Q2                     | Q3                       | Q4                     |
|----|-----------------------|------------------------|--------------------------|------------------------|
| Y1 | 269.2                 | 300.1<br>(QoQ +11%)    | 336.7122<br>(QoQ +12.2%) | 383.2<br>(QoQ +13.8%)  |
| Y2 | 393.9<br>(QoQ +2.8%)* | 441.2<br>(QoQ +12%)    | 497.2<br>(QoQ +12.7%)    | 564.8<br>(QoQ +13.6%)  |
| Y3 | 608.9<br>(QoQ +7.8%)  | 684.4<br>(QoQ +12.4%)  | 774.0<br>(QoQ +13.1%)    | 880.1<br>(QoQ +13.7%)  |
| Y4 | 966.3<br>(QoQ +9.8%)  | 1088.1<br>(QoQ +12.6%) | 1230.6<br>(QoQ +13.1%)   | 1409.1<br>(QoQ +14.5%) |

\*Product rebranding/remanufacturing after 1<sup>st</sup> year of acquiring may lower revenue



Diversifying  
products

MCUs for gaming  
keyboards & mouse

Meter. Healthcare  
and Cooling MCUs

Home Appliance  
MCUs

Low-power and  
wireless MCUs for  
embedded  
solutions



Extending  
clients

Products  
compatible with  
Chinese appliances

Accessibility to  
Sino Wealth's  
clients

IoT embedded  
solutions suitable  
for Chinese  
internet systems

Accessibility to  
Sino Wealth local  
distributors

## Appendix 2: Cost synergy projection – 4 FY

|    | Marketing | R&D     | Logistics | Operating |
|----|-----------|---------|-----------|-----------|
| Y1 | ↓ 15%     | ↓ 1%    | ↓ 20%     | ↓ 30%     |
| Y2 | ↓ 17,50%  | ↓ 3,85% | ↓ 16,67%  | ↓ 10,00%  |
| Y3 | ↓ 11,11%  | ↓ 3,70% | ↓ 7,83%   | ↓ 8,70%   |
| Y4 | ↓ 6,67%   | ↓ 2,59% | ↓ 6,40%   | ↓ 7,41%   |

As Renesas grows,  
% of each category  
will slightly  
decrease due to  
increasing costs



## Appendix 3: CAGR, CR and trends for each product

| Product/Industry        | Key players  | Predicted CAGR/ value   | Life cycle                               | Renesas market share | Trends  |
|-------------------------|--|---|--|----------------------|---|
| MCU                     | NXP, STM, Microchip, Tech, Infineon Tech (58%)             | 6%<br>(2020-2024)<br><br>Value: 17.79 bil (2020) <sup>3</sup>                           | Mature but can be extended in the future | 17%                  | <ul style="list-style-type: none"> <li>• Hardware</li> <li>• Can be further targeted at hobbyists (cameras, etc.) + engineers</li> </ul>  |
| SoC                     | Intel, Qualcomm, Toshiba (>60%)                            | 5%<br>(2020-2024) <sup>5</sup><br><br>Value: \$124.6 bil                                | Rising                                   | 14%                  | <ul style="list-style-type: none"> <li>• Are still being studied and developed</li> <li>• Trends in the future: increase power efficiency, convert to multiprocessor SoCs, reconfigurable logic, devise effective testing time</li> </ul>                                     |
| Analog devices          | Texas Instruments, Analog Devices; (47.5%)                 | 4.8%<br>(2020-2027) <sup>1</sup><br><br>Value: \$54 bil (2020)                          | Rising                                   | 3.2%                 | <ul style="list-style-type: none"> <li>• Mainly used in infrastructure/communication end market</li> <li>• Needs in the market: Minimum costs; Minimum power dissipation; Increasing bandwidth for higher data rates to customers; Feature enhancement, innovation</li> </ul> |
| Power management (PMIC) | Texas Instrument, STMicroelectronics (53.68%) <sup>4</sup> | 4.66%<br>(2020-2027) <sup>2</sup><br><br>Value: 2273.72 Million USD (2020) <sup>2</sup> | Mature                                   | <4.5%                | <ul style="list-style-type: none"> <li>• Growing demand for energy saving products</li> <li>• Trend of miniaturizing electrical components for consumer electronics and wearables</li> </ul>  |

<sup>1</sup>Businesswire <sup>2</sup>Marketwatch <sup>3</sup>Grand View Research <sup>4</sup>Pr Newswire <sup>5</sup>Research and Markets

## Appendix 4: Net Present Value

| RENESAS ELECTRONICS |                            |                    |                     |
|---------------------|----------------------------|--------------------|---------------------|
| WAAC                | 6%                         |                    |                     |
| Year                | After tax cash flow        |                    | Present Value       |
| 0                   | -\$9,143,382,385.95        |                    | -\$9,143,382,385.95 |
| 1                   |                            | \$3,166,720,477.65 | \$2,987,472,148.73  |
| 2                   |                            | \$3,608,743,126.43 | \$3,211,768,535.45  |
| 3                   |                            | \$3,613,533,876.52 | \$3,033,992,722.62  |
| 4                   |                            | \$2,947,241,901.33 | \$2,334,491,634.07  |
|                     |                            |                    |                     |
| NPV Total           |                            |                    | \$11,567,725,040.86 |
| Initial Outlay      |                            |                    | -\$9,143,382,385.95 |
| NPV value           | NPV Total + Initial Outlay |                    | \$2,424,342,654.91  |

| SINO WEALTH ELECTRONICS |                            |                 |                  |
|-------------------------|----------------------------|-----------------|------------------|
| WAAC                    | 6.3%                       |                 |                  |
| Year                    | After tax cash flow        |                 | Present Value    |
| 0                       | -\$36,745,423.81           |                 | -\$36,745,423.81 |
| 1                       |                            | \$15,361,692.16 | \$14,451,262.62  |
| 2                       |                            | \$23,888,103.34 | \$21,140,494.42  |
| 3                       |                            | \$37,587,273.49 | \$31,292,555.44  |
| 4                       |                            | \$36,127,381.84 | \$28,294,591.69  |
|                         |                            |                 |                  |
| NPV Total               |                            |                 | \$95,178,904.17  |
| Initial Outlay          |                            |                 | -\$36,745,423.81 |
| NPV value               | NPV Total + Initial Outlay |                 | \$58,433,480.36  |

| TOTAL NET PRESENT VALUE |                    |
|-------------------------|--------------------|
| Synergies               | \$17,300,000.00    |
| Renesas NPV             | \$2,424,342,654.91 |
| Sino Wealth NPV         | \$58,433,480.36    |
| Total                   | \$2,500,076,135.28 |

# Appendix 5: Diversification

Revenue by end market. Data reported in billion yen except percent

|                | FY0   | Percent/Revenue FY0 | FY1    | Percent/Revenue FY1 | Percent change (YoY) |
|----------------|-------|---------------------|--------|---------------------|----------------------|
| Revenue        | 700.8 | 100                 | 1226.1 | 100                 | +75                  |
| Automotive     | 357.4 | 51                  | 549.8  | 45                  | +54                  |
| Infrastructure | 84.1  | 12                  | 177.3  | 14                  | +111                 |
| Industrial     | 133.2 | 19                  | 233.1  | 19                  | +75                  |
| IoT            | 126.1 | 18                  | 265.8  | 22                  | +111                 |

Revenue by product. Data reported in billion yen except percent

|                                | FY0   | Percent/Revenue FY0 | FY1    | Percent/Revenue FY1 | Percent change |
|--------------------------------|-------|---------------------|--------|---------------------|----------------|
| Total revenue from end markets | 700.8 | 100                 | 1226.1 | 100                 | +75            |
| MCU                            | 343.4 | 49                  | 576.3  | 47                  | +68            |
| SoC                            | 84.1  | 12                  | 122.6  | 10                  | +46            |
| Analog                         | 210.2 | 30                  | 429.1  | 35                  | +104           |
| Power                          | 63.1  | 9                   | 98.1   | 8                   | +55            |